

What is claimed is:

1. A multi-layered printed wiring board having at least three wiring layers each at least having at least one power supply line or a ground line, and another kind of line, said wiring layers each having an outer edge, comprising:

said ground line formed at the outer edge of at least one of said wiring layers;

a basic power supply line formed inside said ground line;

said at least one power supply line extending from said basic power supply line;

a plurality of electronic parts mounted on at least one of said wiring layers; and

wherein said at least one power supply line is wired to mounting positions of said electronic parts via at least one of said wiring layers.

2. A multi-layered printed wiring board according to claim 1, wherein said ground line and said basic power supply line are each shaped substantially in a form of annulus and arranged adjacent to each other.

3. A multi-layered printed wiring board according to claim 2, comprising:

a signal line provided in each of said wiring layers, said signal line connecting between ones of said electrical parts mounted on one of said wiring

layers or connecting between ones of said electrical parts mounted on respective different ones of said wiring layers via at least one of said wiring layers; and

5        wherein said power supply line and said signal line are formed inside said basic power supply line.

4.    A multi-layered printed wiring board having at least three wiring layers each at least having at least one power supply line or a ground line, and  
10    another kind of line, said wiring layers each having an outer edge, comprising:

      said ground line formed at the outer edge of at least one of said wiring layers;

      a plurality of electronic parts mounted on at  
15    least one of said wiring layers;

      said at least one power supply line provided in a predetermined one of said wiring layers at a location inside said ground line, said at least one power supply line being wired to mounting positions of said  
20    electronic parts via at least one other one of said wiring layers;

      a signal line provided in each of said wiring layers, said signal line connecting between ones of said electrical parts mounted on one of said wiring  
25    layers or connecting between ones of said electrical parts mounted on respective different ones of said wiring layers via at least one of said wiring layers;

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and

a ground pattern formed over a region other than said power supply line and said signal line and connected to said ground line.

5           5. A multi-layered printed wiring board according to claim 4, wherein said ground line and ground pattern are formed such that said ground line and ground pattern substantially entirely cover said multi-layered printed wiring board when said ground  
10 line and ground pattern are projected on one projection plane.

6. A multi-layered printed wiring board according to claim 4, comprising:

a basic power supply line formed at the outer edge  
15 of at least one of said wiring layers at a location adjacent to and inside said ground line;

wherein said power supply line is formed inside said basic power supply line and extends from said basic power supply line via at least one of said wiring  
20 layers such that said power supply line is wired to mounting positions of said electrical parts; and

said signal line is formed inside said basic power supply line, said signal line connecting between ones of said electrical parts mounted on one of said wiring  
25 layers or connecting between ones of said electrical parts mounted on respective different ones of said wiring layers via at least one of said wiring layers.

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7. A multi-layered printed wiring board according to claim 6, wherein said ground line and said basic power supply line are each shaped substantially in a form of annulus and arranged adjacent to each other.

8. A multi-layered printed wiring board according to claim 4, wherein said power supply line and said power supply line are arranged so as not to overlap said power supply line and said signal line in at least one other one of said wiring layers which is adjacent to said at least one of said wiring layers in which said power supply line is formed, when said power supply lines and said signal lines are projected on one projection plane.

9. A multi-layered printed wiring board having at least three wiring layers each at least having at least one power supply line or a ground line, and another kind of line, said wiring layers each having an outer edge, said multi-layered printed wiring board comprising:

a first wiring layer constituting one of said wiring layers, and having ground line formed at the outer edge of said first wiring layer, a first basic power supply line formed adjacent to and inside said ground line, and a first power supply line extending from said first basic power supply line;

a second wiring layer constituting one of said

wiring layers, and having a ground pattern formed at the outer edge of said second wiring layer, a second basic power supply line for supplying a different voltage from a voltage supplied by said first basic power supply line, said second basic power supply line being formed at a position where said first basic power supply line is projected when said second basic power supply line and said first basic power supply line are projected on one projection plane, and a second power supply line extending from said second basic power supply line; and

a plurality of electronic parts mounted on at least one of said wiring layers;

wherein said first and second power supply lines extending from said first and second basic power supply lines, respectively are wired to mounting positions of said electronic parts via at least one of said wiring layers.

10. A multi-layered printed wiring board according to claim 9, wherein said ground line and ground pattern and said first and second basic power supply lines are each shaped substantially in a form of annulus.

11. A multi-layered printed wiring board according to claim 10, comprising:

a signal line provided in each of said wiring layers, said signal line connecting between ones of

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said electrical parts mounted on one of said wiring layers or connecting between ones of said electrical parts mounted on respective different ones of said wiring layers via at least one of said wiring layers;

5 and

a ground pattern formed over a region other than said first and second power supply lines and said signal line and connected to said ground line and ground pattern; and

10 wherein said first and second power supply lines and said signal line are formed inside said first and second basic power supply lines.

12. A multi-layered printed wiring board having at least three wiring layers each at least having at  
15 least one power supply line or a ground line, and another kind of line, said wiring layers each having an outer edge, comprising:

said ground line formed at the outer edge of at least one of said wiring layers;

20 a first basic power supply line formed adjacent to and inside said ground line;

a second basic power supply line formed adjacent to and inside said ground line to supply a different voltage from a voltage supplied by said first basic  
25 power supply line;

at least two power supply lines extending from respective ones of said first and second basic power

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supply lines;

a plurality of electronic parts mounted on at least one of said wiring layers; and

wherein said power supply lines are wired to mounting positions of said electronic parts via at least one of said wiring layers.

13. A multi-layered printed wiring board according to claim 12, wherein said ground line and said first and second basic power supply lines are shaped substantially in a form of annulus.

14. A multi-layered printed wiring board according to claim 12, comprising:

a signal line provided in each of said wiring layers, said signal line connecting between ones of said electrical parts mounted on one of said wiring layers or connecting between ones of said electrical parts mounted on respective different ones of said wiring layers via at least one of said wiring layers; and

a ground pattern formed over a region other than said power supply lines and said signal line and connected to said ground line; and

wherein said power supply lines and said signal line are formed inside said second basic power supply line.

15. A multi-layered printed wiring board having at least three wiring layers each at least having at

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least one power supply line or a ground line, and another kind of line, said wiring layers each having an outer edge, comprising:

5       said ground line formed at the outer edge of each of said wiring layers;

          a basic power supply line formed adjacent to and inside said ground line in each of said wiring layers;

          a plurality of electronic parts mounted on at least one of said wiring layers;

10       said at least one power supply line provided in at least one of said wiring layers at a location inside said basic power supply line, said at least one power supply line extending from said basic power supply line via at least one other one of said wiring layers and  
15       wired to mounting positions of said electronic parts;

          a signal line provided in each of said wiring layers, said signal line connecting between ones of said electrical parts mounted on one of said wiring layers or connecting between ones of said electrical  
20       parts mounted on respective different ones of said wiring layers via at least one of said wiring layers; and

          a ground pattern formed over a region other than said power supply line and said signal line at a  
25       location inside said basic power supply line in at least one of said wiring layers; and  
          wherein said ground line in at least one of said wiring

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layers has a width greater than said ground line in the other wiring layers and connected to said ground pattern via at least one through hole.

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